

Course Title: Electronic Principles PR
Course No: CSIT.114
Nature of the Course: Practical
Year: First, Semester: First
Level: Bachelor of Science in Computer Science

year: 1st
Semester: 1
Credit: 1

Objectives:

By the end of the course the student should be able to:

- measure correctly the basic physical quantities
- determine errors in measurements
- analyze raw data and make valid conclusions
- validate corresponding theoretical component
- develop proper laboratory skills
- design basic physics experiments
- interpret experimental results and draw logical conclusions
- relate theoretical concepts to practical skills

Laboratory Works:

- To draw I-V characteristics of Ohmic and non Ohmic resistors and find voltage current relation.
- To study the junction diode and LED characteristics.
- To study the temperature dependence of resistance of a given semiconductors
- To determine the impedance of a given LCR circuit.
- To study characteristics of NPN transistor.
- To determine dielectric constant by using Lissagous pattern.
- To construct CE amplifier for the determination of the voltage gain of the amplifier.
- To study the characteristic of a Zener diode (Switches) and use it to regulate power supply.
- To construct and study the working of NOT-AND-OR, NAND and NOR gates.
- To construct and study the working of OR, NAND and NOR gates.

Note:

- Student must perform 6 Hours of lab work (2 Hours x 3 times or 3 Hours x 2 times) every week
- In every semester, at least Eight experiments are to be performed. Additional experiments may be added subject to availability of time.
- The practical exam will be graded on the basis of the following marking scheme:

In-Semester Evaluation	20 %
Final Exam Written	60 %
Final Exam Oral	20 %

Books:

1. *B.Sc. Practical Physics*: C. L. Arora, S Chand and Company Ltd.
2. *Practical Physics*: G. L. Squires, Cambridge University Press.
3. *Practical Physics*, P. K. Shukla and A. Srivastava, New Age International (P) Limited